



**ABOVE •** Dr. Jane Goodall visited NIH on Apr. 11 to discuss her research and activism. See story below.

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# nih record

## Recreating the Heyday

## New NIH-Lasker Collaboration Boosts Clinical Research

By Carla Garnett

**D**r. Marston Linehan gets animated talking about kidney cancer. You can see his passion for his work in every gesture. Nearly three decades into his NIH career, he gets emotional when he describes the people he's treated—especially the ones who didn't survive.

"This is the first person I saw with this," he said, showing a slide at a recent symposium. "An 18-year-old female from Charlottesville. She had a 10-centimeter kidney tumor, which I removed. She died 9 months later, of invasive disease. Her mother also died [with the same cancer] after about 14 months. It took us 18 years to figure out what they were suffering from."

The symposium marked the launch of the new NIH-Lasker Clinical Research Scholars Program. The program has high ambition:



At a symposium for the new NIH-Lasker clinical scholars program, Dr. Marston Linehan discusses his research on kidney cancer.

SEE NIH-LASKER, PAGE 6

## Primate Scientist Goodall Reflects on Her Career, Activism

By Trisha Comsti

Primate researcher Dr. Jane Goodall greeted the audience in Masur Auditorium by cheerfully imitating the sound a chimpanzee makes on a typical morning in Gombe, Tanzania. It was in Gombe 50 years ago that she began the research program that would later blossom into the Jane Goodall Institute. Over the next hour, Goodall shared the story of how she came to study chimpanzees in Africa and eventually became an activist on their behalf.

NIH director Dr. Francis Collins introduced Goodall at the special event on Apr. 11, remarking on her three dozen honorary degrees, almost 100 awards and 1986 landmark book *The Chimpanzees of Gombe: Patterns of Behavior*. "Tarzan and Dr. Dolittle were her favorite books," said Collins, speaking of Goodall as a young girl. "She knew she'd be a much better jungle companion for Tarzan than that other Jane. And she was right."

SEE GOODALL, PAGE 4

## Best-Kept Secret?

## Bio-Trac Program Keeps Scientists, Students on Right Track

By Jan Ehrman

What scientific enterprise conducted at NIH has trained nearly 14,000 scientists since its inception more than 25 years ago, yet remains little known?

The program is called Bio-Trac, which offers state-of-the-art scientific workshops and accredited courses through the auspices of the Foundation for Advanced Education in the Sciences (FAES). Bio-Trac has been a leader in training today's investigators as well as young scientists hoping to make science their vocation.

Conducted at a postgraduate level and offered to both NIH researchers and outside scientists as well as teachers and science students at all levels beyond elementary school, Bio-Trac's 43 accredited courses include lectures and hands-on laboratory workshops in such areas

SEE BIO-TRAC, PAGE 8



The NIH **Record** is published biweekly at Bethesda, MD by the Editorial Operations Branch, Office of Communications and Public Liaison, for the information of employees of the National Institutes of Health, Department of Health and Human Services. The content is reprintable without permission. Pictures may be available upon request. Use of funds for printing this periodical has been approved by the director of the Office of Management and Budget through September 30, 2011.

To receive alerts to our latest issue, send an email to [listserv@list.nih.gov](mailto:listserv@list.nih.gov) with the words "Subscribe NIHRECORD" in the message body.

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## briefs

### NIH Observes Asian Pacific American Heritage Month, May 24

The 39th annual NIH Asian Pacific American Heritage Month Observance is Tuesday, May 24 from 11 a.m. to noon in Lipsett Amphitheater, Bldg. 10. This year's theme is "Leadership, Diversity, Empowerment and Beyond." The keynote speaker is Dr. Flossie Wong-Staal, chief scientific officer and co-founder, iTherX Pharmaceuticals, Inc. She previously served as section chief in NCI's Laboratory of Tumor Cell Biology, where she and her colleagues were the first to clone the human immunodeficiency virus and determine its genetic structure. For reasonable accommodation and more information, call Tyrone Banks at (301) 451-9692 or use the Federal Relay Service at 1-800-877-8339.

### Ethnic Food Fair, May 25

The Ethnic Food Fair, an annual celebration of food, culture and community sponsored by the NIH Asian & Pacific Islander American Organization (APAO), will be held on Wednesday, May 25 from 11:30 a.m. to 1:30 p.m. on the Bldg. 31A patio. You will find a variety of food offerings by area restaurants, gift items and entertainment. Join hands-on activities such as origami and learn about professional organizations and community health groups. Participating restaurants include Delhi Dhaba, Korean Korner and Shanghai Café. This year, APAO will donate a portion of proceeds to the Japanese Earthquake Fund. Every year, activities across the nation are organized in observation of Asian Pacific American Heritage Month. For more information, contact Aaron Bell, (301) 451-7898 or [bella@mail.nih.gov](mailto:bella@mail.nih.gov).

### 2011 Medicine for the Public Lecture Series

Discover the latest in research and treatment for obesity and depression with experts from the Clinical Center, Johns Hopkins Medicine and Suburban Hospital.

Tuesday, May 17—Confronting Obesity: Updates in Prevention and Treatment Research

Tuesday, May 24—Challenging Depression: New Insights into Research and Treatment

Both lectures will be held from 7 to 8:30 p.m. at Suburban Hospital Auditorium, 8600 Old Georgetown Rd., Bethesda. Register by calling (301) 896-3939. Lectures are free and open to the public. Light refreshments are available at 6:30 p.m. For more information, visit [www.cc.nih.gov/about/news/mfp.shtml](http://www.cc.nih.gov/about/news/mfp.shtml).

### Lecture on Threat of Human Papillomavirus

The women's health scientific interest group lecture series will present "Human Papillomavirus (HPV): A Bigger Threat Than Previously Realized," on Friday, May 20 from 11 a.m. to 12:30 p.m. in Bldg. 50, Rm. 1328-1334. Speakers will be Dr. Eileen Dunne, Division of STD Prevention, CDC, and Dr. Vundavalli Murty, Institute for Cancer Genetics, Columbia University. Moderator will be Dr. Allan Hildesheim, chief, Infections and Immunoepidemiology Branch, NCI. Individuals who need sign language interpreters and/or reasonable accommodation to participate should contact Socorro Vigil Scott at [vigilscs@mail.nih.gov](mailto:vigilscs@mail.nih.gov) or (301) 402-8340, and/or the Federal Relay (1-800-877-8339).

### NIH Chamber Singers in Concert

The NIH Chamber Singers, directed by Dwight Brock, are presenting their spring program—Music, Song and the Spirit—at three local venues in May. The performances include the works of composers from the 16th to the 21st centuries. The centerpiece is "A Serenade to Music" by Ralph Vaughan Williams. Shelley Roth will accompany the group on piano for this song; other works are performed *a cappella*. Admission to all concerts is free. The program will be presented at the following times and locations: May 15, 1:30 p.m., North Chevy Chase Christian Church, 8814 Kensington Parkway, Chevy Chase; May 25, noon, atrium of the Clinical Research Center; May 26, 7 p.m., Marilyn Praisner Library, 14910 Old Columbia Pike, Burtonsville, Md. To request sign language interpretation or other reasonable accommodation, or for more information, contact Valerie Lambros at [lambrosv@mail.nih.gov](mailto:lambrosv@mail.nih.gov) or (301) 594-7557.

### 2nd Annual RecGov Fair, May 17

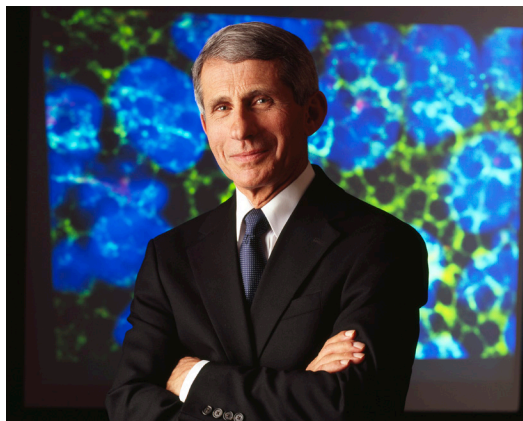
On Tuesday, May 17, the R&W will host the 2nd annual RecGov Fair on the Bldg. 31A patio from 10 a.m. to 2 p.m. More than 30 vendors will participate, offering great discounts and specials to NIH employees. Check out discounts on cell phone services, vacation packages, corporate housing, home services and more. In addition, Chick-Fil-A will be on hand with lunch for sale. R&W will also hold a door prize raffle for all attendees. Enjoy an afternoon of food, discounts and fun.

### Bike to Work Day, May 20

Celebrate National Bike Month and Bike to Work Day on Friday, May 20, from 7-9:30 a.m. NIH director Dr. Francis Collins and NCI director Dr. Harold Varmus will both bike to work and will give remarks at the pit stop at Paul Rogers Plaza in front of Bldg. 1 around 8:30-9 a.m. NIH has won the Metropolitan Washington Council of Governments award 5 years in a row for being the area's biggest employer of Bike to Work Day participants. Register online at [http://waba.org/events/btwd/md\\_nih.php](http://waba.org/events/btwd/md_nih.php).

# nih record





NIAID director Dr. Anthony Fauci has been closely involved in the fight against HIV/AIDS since it began.

## Fauci To Reflect on 30 Years of HIV/AIDS

On June 5, 1981, the first published description of a mysterious illness involving five young, previously healthy gay men appeared in the CDC publication *Morbidity and Mortality Weekly Report* (MMWR). The cases marked the first recognition of what is now known as AIDS, a disease that has claimed the lives of more than 30 million people worldwide since that first report 30 years ago.

NIAID director Dr. Anthony Fauci, who has been closely involved in the fight against HIV/AIDS since it began, will describe his personal experiences as a physician, HIV/AIDS researcher and scientific administrator at a lecture to commemorate the 30th anniversary of the MMWR report. It will take place on Tuesday, May 31, from 2 to 3 p.m. in Lipsett Amphitheater, Bldg. 10. It also will be webcast at <http://videocast.nih.gov>.

When the first AIDS cases appeared, Fauci headed NIAID's Laboratory of Immunoregulation and was renowned for his work in developing therapies for inflammatory and immune-mediated diseases such as polyarteritis nodosa and Wegener's granulomatosis. After reading a second MMWR report in July 1981 about an additional 26 cases of the mysterious disease, he recognized that these cases were more than a curiosity and made the decision to redirect his lab's focus to studying the illness.

He admitted his first AIDS patient to the Clinical Center in January 1982. In the early years of the epidemic when effective treatment was not yet available, Fauci and his colleagues spent hours providing care to patients who, on average, lived no longer than 6 months. It soon became clear that this was not just a gay man's disease, as new infections cropped up among different groups including injection drug users, hemophiliacs, heterosexual men and women and babies who acquired infections from their mothers during birth or breastfeeding.

In 1984, Fauci was named NIAID director but continued to lead his lab and see patients. That year also marked the first major breakthrough

in AIDS research—the identification of human immunodeficiency virus (HIV) as the cause of AIDS. That discovery made possible the subsequent development of blood-screening tests and antiretroviral medications that have improved and lengthened the lives of millions of people worldwide.

Fauci will describe how relationships he forged with gay activists helped advance HIV treatments and led to an accelerated drug approval pathway that still exists today; his experiences with five successive White House administrations over the course of the pandemic; the advances in HIV treatment that have turned an almost certain death sentence into what is now for many a manageable chronic health condition; progress and continued research to find new ways to prevent HIV infection and, ultimately, a cure; and the challenges that remain.—Kathy Stover

## New Plan for Obesity Research Seeks to Curb Epidemic

NIH released its second Strategic Plan for NIH Obesity Research recently. Developed by the NIH obesity research task force with input from external researchers, health care providers and the public, the plan highlights the crucial role of research in reducing obesity, emphasizes moving science from laboratory to clinical trials to practical solutions and is designed to help target efforts and resources.

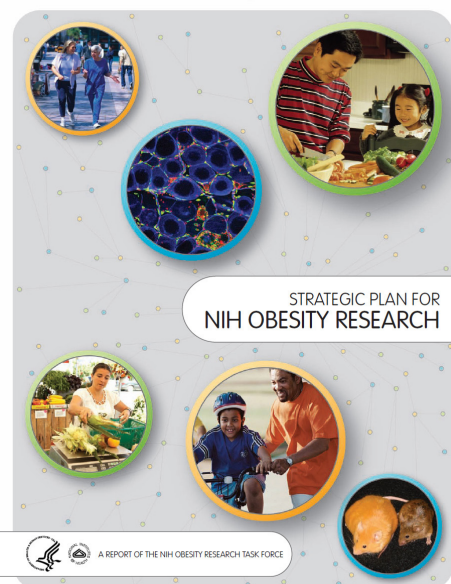
"Obesity has many causes and contributing factors. This plan is a bold blueprint that will encourage the research community to examine the epidemic of obesity from diverse perspectives," said NIH director Dr. Francis Collins. "Through the scientific opportunities outlined in the strategic plan, researchers can work together toward the goals of preventing and treating obesity, to help people lead healthier and more fulfilling lives."

More than one-third of adults and nearly 17 percent of children in the United States are now obese, which increases the chance of developing health problems including type 2 diabetes, heart disease, high blood pressure, fatty liver disease and some cancers. In 2008, obesity-related medical costs were an estimated \$147 billion.

The 2011 plan builds on NIH's first obesity strategic plan, released in 2004. Research recommendations in the new plan fall into the following areas:

- ❑ Discover key processes that regulate body weight and influence behavior
- ❑ Understand factors that contribute to obesity and its consequences
- ❑ Design and test new approaches for achieving and maintaining a healthy weight
- ❑ Evaluate promising strategies to prevent and treat obesity in real-world settings and diverse populations
- ❑ Use technology to advance obesity research and improve health care delivery.

The plan also highlights education and outreach to broaden the impact of research and improve public health. To learn more about it, visit [www.obesityresearch.nih.gov](http://www.obesityresearch.nih.gov).



## GOODALL

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### Laying the Foundation

In 1960, Goodall traveled to the shores of Lake Tanganyika and began her field research in chimpanzee behavior and biology in what today is Gombe National Park in Tanzania.

Goodall observed the importance of early rearing experience and good mothering in chimpanzees and saw a parallel in her own life. “I attribute anything I’ve done in my life of which I’m a little bit proud to the wise way my mother raised me,” Goodall said. She told the audience that her mother was the only person who fully supported her “crazy idea” to go to Africa.

In those early days, Goodall conducted chimpanzee studies using low-tech methods by today’s standards: she peered through binoculars and wrote her notes with a pencil and notebook by the light of a hurricane lamp. Eventually, she “graduated” to more modern technology—a manual typewriter and cassette tapes.

Goodall’s mentor and first research collaborator was archaeologist and paleontologist Dr. Louis S.B. Leakey. Through him, Goodall learned that, “Chimps are doorways of understanding the pathways of human evolution.” It was Leakey’s hope that by better understanding chimpanzees, the animals that are genetically most like humans, we would better understand our early human ancestors.

“What strikes me is how like us they are,” Goodall said. Scientists have been comparing behavior, gene expression and biology between chimpanzees and humans with the aim of identifying a common ancestor of the two species. The chimpanzees in Gombe did indeed exhibit a number of human traits, including making and using simple tools, learning through observation and communicating with each other using gestures and sounds.

Besides laughter—for which Goodall performed another chimp impression—she also observed chimpanzees swaggering in dominance, patting each other for reassurance and gesturing to defuse a seemingly awkward social situation in which a chimpanzee seeks approval from a more dominant individual. In this way, Goodall observed a sort of “culture” among the chimpanzees in Gombe.

As in human culture, Goodall saw the dark side of chimpanzee behavior. Chimps can turn violent when protecting their territory, particularly when it involves males “patrolling” against neighboring social groups. But Goodall took care to also

describe the altruism of chimpanzees, which was especially evident in their close family relationships. Female chimps were seen maintaining close bonds with their children for life and older siblings were observed “adopting” younger siblings left as orphans.

### Taking Action

As much as Goodall learned from her studies in the field, Leakey urged her to return to school for a formal education. As Goodall worked toward her doctorate and conducted research for her first book, a conference was organized that brought together chimpanzee biologists from across Africa and from non-invasive captive environments.

“I went into that conference as a scientist...but I came out an activist,” Goodall said. At this event, she came to the realization that chimpanzees were quickly disappearing from the wild and being mistreated in their use as objects of entertainment, as pets and as subjects in medical research. The questions posed at this first conference included: Should we be using beings who are so like us in medical research? And if we do use them, should we be keeping them in their current conditions?

While Goodall is a strong proponent of animal rights, she also recognizes the importance of chimpanzees in medical research. Because of their similarities to humans in terms of DNA structure, blood and immune systems, they have been important in the search for cures and vaccines for otherwise uniquely human diseases.

### The Way Ahead

One hundred years ago there were 1 million to 2 million chimpanzees in the wild; today, the population is estimated at just 350,000, their numbers falling as a result of habitat destruction and human population growth. Goodall also remarked on some of the other challenges facing the next generation including global warming, hunger, poverty and war. Yet she remains hopeful for the future.

“The way forward, I think...is to find a better way to conduct ourselves on this planet,” Goodall said. She emphasized that each of us has a role to play and that it can begin with thinking about the choices we make, including how we treat animals and the environment. Goodall noted that an important difference between humans and chimpanzees is our ability to discuss big ideas and make plans for the future with one another despite differences in background and philosophy. “Let’s get together, brain and heart, and dream big for the future.”

#### Right:

*Jane Goodall divulged at her Apr. 11 talk at NIH, “People think I like chimps the best, but I like dogs the best.”*

PHOTO: MICHAEL SPENCER







*A Chilean delegation met the equipment at the airport in Santiago.*

PHOTO: ROBERTO MATUS

## NIH Helps Stricken Chile, Haiti with Equipment Loans

By Steve Goldstein

Following months of hard work and diligent collaboration, 5 tons of scientific and laboratory equipment from NIH arrived recently in Chile to assist numerous university research laboratories and facilities severely damaged by the 8.8 magnitude earthquake and resulting tsunami of Feb. 27, 2010.

"We're very pleased that the equipment has been delivered to the Chilean laboratories," said Dr. Michael Gottesman, NIH deputy director for intramural research. "This is the result of months of hard work by many people and the effort will no doubt help reinvigorate the NIH's historically robust collaborative research partnerships with scientists in Chile."

The 84 items of equipment being loaned include computers, microscopes, micro-injectors, centrifuges and freezers. The NIH Office of Intramural Research and Chilean intramural researchers on campus surveyed research colleagues in Chile and compiled a list of needed equipment to replace what was damaged or destroyed during the earthquake.

Fogarty worked with the Embassy of Chile in Washington to coordinate the loan, which identified the Chilean National Commission for Scientific and Technological Research (CONICYT)—the NIH counterpart institution—to receive and distribute the used laboratory and scientific equipment. Designated for support are the University Catolica del Maule, University of Concepcion, University of Chile, University of Chile-INTA (Institute of Nutrition and Food Technology) and the University of Talca.

Completing the chain of cooperation, the 10,000 pounds of equipment was shipped to Chile without charge by FedEx in an arrangement coordinated between the delivery company and the Chilean Embassy in D.C.

"This is an excellent example of a bilateral relationship built not only in big announcements, but also built over a matrix of collaborative and



*The University of Concepcion is one of numerous Chilean university research laboratories and facilities receiving the equipment.*

PHOTO: JAMES HERRINGTON


standing in the pursuit of knowledge," said Maria Elena Boisier of CONICYT.

The equipment loan is anticipated to be permanent.

The equipment arrived in Santiago just days before the visit to Chile by President Barack Obama. The loan will help reestablish the ability of Chilean institutions to perform cutting-edge biomedical health research.

"In extraordinary circumstances, scientists have to pull together," said Fogarty director Dr. Roger Glass.

In a similar effort, Haiti, which is also trying to recover from a severe earthquake last year, received an equipment loan through the efforts of Fogarty and the Clinical Center. Two SonoSite ultrasound machines arrived in Haiti recently to be loaned to long-time NIH grantee GHESKIO, with the shipping costs paid by the Clinical Center. "We can guarantee this equipment will be put to good use," said Dr. Jean William Pape, director of GHESKIO.

The portable ultrasound machines will be used in Haiti for cholera patients in hypovolemic shock who need vascular catheterization due to fluid loss from severe diarrhea. 

## NLM Co-Sponsors Clinical Trials Conference

The National Library of Medicine, the Friends of the National Library of Medicine and the American Association for the Advancement of Science are co-sponsoring a conference exploring the future of clinical trials. "Clinical Trials: New Challenges and Opportunities" will be held June 6-7. A keynote address and evening activities will be held in downtown Washington June 6, followed by a full day of presentations and panel discussions June 7 at the Lister Hill Center, Bldg. 38A.

NIH director Dr. Francis Collins is among more than a dozen speakers representing government, industry, academia and patient advocacy groups. For details on the conference program and registration fees, visit [www.fnlm.org/](http://www.fnlm.org/).





## NIH-LASKER

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### **Above, from l:**

Presenting research at the symposium are Dr. Charles Sawyers of Memorial Sloan-Kettering Cancer Center, NHGRI scientific director Dr. Daniel Kastner and Dr. Christine Seidman of Harvard Medical School.

### **Below:**

Momentarily at a microphone for audience use, NIH director Dr. Francis Collins takes part in the scientific discussion, as he couldn't resist what he called "this feast of wonderful science."

PHOTOS: BILL BRANSON



Recreate NIH's heyday of clinical research.

One of four scientific presenters, Linehan told dramatic war stories, all about how he and his patients fight hereditary kidney tumors.

He spoke of rewarding successes: One study helped provide the foundation for development of 6 FDA-approved drugs.

He lamented "humbling" failures: One particularly aggressive form of kidney cancer kills 100 percent of people who develop advanced disease.

He waxed on about being able to switch gears when he needed to, about not being required to hew to traditional treatments, about being encouraged to set new standards for care.

Throughout it all, though, he boldly sang the praises of the unique institution that is the Clinical Center and the unequaled intellectual nourishment and freedom such a community provides.

"Here they respect ideas," said Linehan, chief of NCI's Urologic Oncology Branch and a nearly 30-year veteran NIH clinical investigator. "Here you could turn on a dime. Here, if you have a good idea and want to pursue it, you can do that."

Truth is, NIH doesn't have enough Linehans.

### **Expanding the Niche**

As long ago as 1979, NIH realized its clinical researcher population was dwindling. In fact, then NIH director Dr. James Wyngaarden observed in an article that clinical investigators were becoming "an endangered species."

More than 30 years later, NIH director Dr. Francis Collins said, they're still "a vanishing breed." He pointed out several reasons their ranks have continued to shrink:

- ▼ long training course
- ▼ large debts physicians acquire

▼ absence of protected time to conduct research

▼ environments not conducive to "big thinking."

Time to "expand the niche," Collins said, adopting evolutionary terms. "That's what we're trying to do here with the NIH-Lasker Clinical Research Scholars Program—provide a chance in a very competitive atmosphere for the best and brightest of physician-scientists to come here for an opportunity to explore those big ideas that can happen in unique ways, with the fantastic facilities of the Clinical Center and the minds of the 7,000 doctoral-trained individuals on this campus who are experts in almost everything you can think of as potential collaborators."

### **'Chimeric' Idea Realized**

NIH deputy director for intramural research Dr. Michael Gottesman recalled it was nearly 2 years ago when NIH scientific directors "proposed the idea of a chimeric program that would allow investigators to come to NIH for several years and then have the opportunity to participate in extramural grant support, the goal being to give them about 12 years of protected research time."

NIH-Lasker clinical scholars will spend the first 5 to 7 years as independent investigators in the NIH Intramural Research Program. In the second phase, an additional 5 years of funding will be offered to scholars who successfully complete the first phase. Investigators can stay here for phase 2, or take their funding with them to another research institution.

Opening the symposium, Lasker Foundation president Dr. Maria Freire described clinical research as an "exquisite interplay" involving bench scientists, clinical practitioners and "highly trained, highly skilled individuals who know the language of the laboratory, who are fluent in the language of patient care and who can move and communicate with ease in both worlds."

NIH-Lasker clinical scholars will be those individuals, she said.





### A Diaspora Delivers

Endorsing the new program, NCI director Dr. Harold Varmus said he represents “the old guard who came to NIH long ago as Yellow Berets,” almost all of whom opposed the Vietnam War and were interested in developing careers in academic medicine.

Collins noted a remarkable statistic: Varmus and fellow “old guardians” who participated in NIH’s Clinical Associate Training Program from 1955 to 1973 include nine Nobel prize winners—one every 2 years on average.

As Varmus and his colleagues departed the campus, many of them became what Varmus called “the Diaspora from NIH, creating strong departments in clinical and basic research around the country.”

He too cited reasons the rolls of clinical investigators have declined.

“There are lots of pressures on the system, despite the great opportunities,” he said. “Rising costs of research, declining numbers of patients in the CC and other important barriers to recruitment of clinical scientists to NIH—especially at the mid and high levels of accomplishment because of other financial opportunities and opportunities to work productively in the development of therapeutics in a way that can be difficult at NIH, if complete engagement with the industrial sector is advisable...NIH similarly is somewhat shackled by limitations in salaries and by ethics rules that can be overbearing.”

The new program may help ease some of these stresses, he said.

“This is a fantastic time for NIH to make full use of



the potential of clinical research on this campus,” he concluded, “and there’s no better way to do this than to link with the Lasker legacy.”

### Worthy Role Models

Introducing the symposium, Gottesman said the agenda featured “outstanding translational researchers who are role models for the kinds of scientists we would like to nurture in this program.”

In addition to Linehan, presenters included:

- ▼ Dr. Charles Sawyers of Memorial Sloan-Kettering Cancer Center, who discussed drug resistance in cancer treatment, particularly single-agent targeted molecular therapies;
- ▼ NHGRI scientific director Dr. Daniel Kastner, who came to NIH as a rheumatology fellow in 1985, and has spent more than 20 years studying genetic inflammatory diseases; and
- ▼ Dr. Christine Seidman of Harvard Medical School, who quipped that her talk would finally “get to the heart of things,” and spoke about cardiovascular disease and genetics.

### Above, from l:

NCI director Dr. Harold Varmus discusses his earliest days at NIH as a clinical associate.

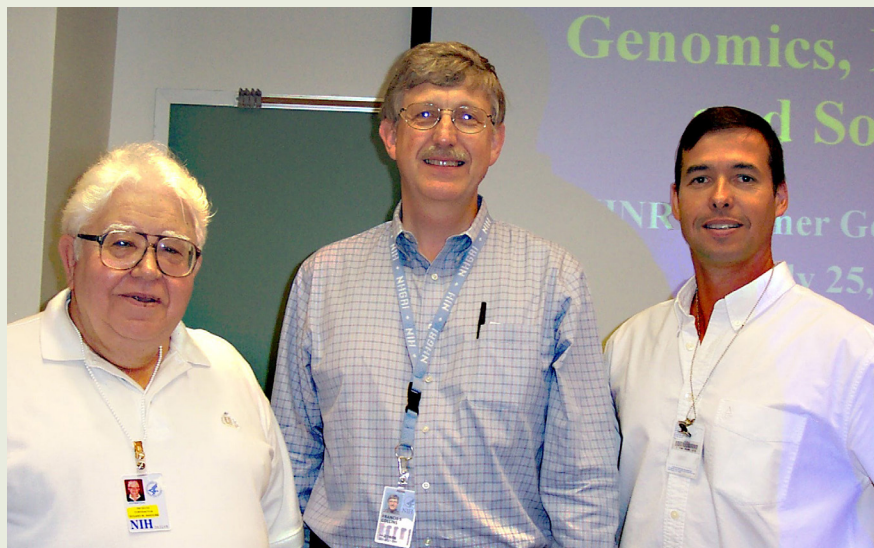
NIH deputy director for intramural research Dr. Michael Gottesman and Lasker Foundation president Dr. Maria Freire talk about the new clinical scholars program.

### Below:

At the kickoff symposium for the collaboration are (from l) Lasker Foundation Chair Emeritus James Fordyce, Sawyers, Seidman, Freire, Kastner, Varmus, Collins, Gottesman, Linehan and Lasker Foundation chair Dr. Alfred Sommer.







## BIO-TRAC

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### Above:

Dr. Roland M. Nardone (l), professor emeritus at Catholic University, Dr. Francis Collins (c) and Bio-Trac Director Mark Nardone pause for a photo taken at a past FAES/NINR Summer Genetics Institute (SGI) program in which Collins, then director of NHGRI, was a presenter. SGI is one of the specialty programs with which the Bio-Trac program is involved.

as microscopy, proteomics and genomics. The courses typically last 3 to 5 days and instructors come from NIH or the outside research community, according to Mark Nardone, program director.

Approximately 85 percent of the program's attendees are M.D.s or Ph.D.s and nearly two-thirds are from NIH; the remaining participants are from industry and academia. Successful completion of each course garners academic credit as well as a certificate from FAES.

While Bio-Trac came to be known as it is today in 1985, its earliest days date to the 1970s, when it budded from a series of EEO training programs and NIDDK-sponsored extramural training workshops.

The impetus for the program came, in large measure, at the hands of Dr. Roland M. Nardone, professor emeritus at Catholic University and father of the current Bio-Trac director. His expertise in cell biology prompted development of courses such as "Cell and Molecular Approaches to the Study of Cancer" and "Animal and Human Tissue Culture." Assisting the elder Nardone in his pioneering efforts were NIDDK's Drs. Lou Cohen, Earl Laurence and Freddie Brown.

While the early days involved only the training of active researchers, the current Bio-Trac protocol also includes outreach courses for teachers and collegians as well as middle and high school science students. For the past 18 years, Bio-Trac has trained college biology majors and their professors at historically black colleges and universities, Hispanic-serving institutions and schools serving Native Americans.

The earliest training facilities were vastly different from today's, recalls Mark Nardone. "We had to squeeze the instructors and the participants

into one tiny area pretty much the size of a shoe-box," he noted. Currently, Bio-Trac sessions are held in a modern laboratory in Bldg. 60.

"The courses taught in Bio-Trac can be very useful for scientists as they learn new research areas," said NCI's Dr. Attore Appella, who has taught sessions on such topics as protein purification and the cell cycle. "The lecturers are very open to questions, even long after the course has ended.

"The program is so unique," he continued. "I know of no other comparable series that has been running for so long and instructed as many students, not only from NIH, but from institutions all around the world."

Though classes are well attended, many NIH'ers remain in the dark about the program. "Bio-Trac remains probably the best kept secret on campus," Nardone said.

For more information about it, visit [www.bio-trac.com](http://www.bio-trac.com). 



## NCI Offers New Minority-Focused Resources on Skin Cancer

New educational resources from NCI's Division of Cancer Epidemiology and Genetics and Office of Communications and Education provide information on skin cancer risk, prevention and detection for African-American, Asian-American, Native-American and Hispanic/Latino audiences. These materials, which can be accessed in English and Spanish, help to dispel the belief that only people with light (fair) skin are at risk of skin cancer. Although skin cancer is less common among people with darker skin, it is often detected at later or advanced stages.

A brochure, *Anyone Can Get Skin Cancer*, and Lifelines video and news article discuss how to find skin cancer early, what skin cancer looks like and how to lower the risks of developing skin cancer. To view these resources, visit [www.cancer.gov/anyone-can-get-skin-cancer?cid=ENskin\\_record](http://www.cancer.gov/anyone-can-get-skin-cancer?cid=ENskin_record).



# milestones

## Kupfer, NEI's First Director, Mourned

Dr. Carl Kupfer, who served as director of the National Eye Institute for 30 years, died Apr. 7 after a long illness. He was 83.

Kupfer was appointed the first director of NEI in 1970 after the institute was established by Congress. He was also director of the Fogarty International Center at NIH in 1988. In his time at NEI, he served under six NIH directors and six U.S. presidents. He witnessed the NEI budget grow from \$24 million in 1970 to more than \$450 million in 2000.

Reflecting on Kupfer's long and productive career, current NEI director Dr. Paul Sieving said, "Creating an NIH institute from whole cloth is a daunting task. But Carl had a vision for the NEI and persevered to make it a reality. He was one of the first NIH directors to implement strategic planning and much of the institute's guiding principles were codified in those early plans. He was dedicated to clinical research and the development of clinician scientists. He believed in the primacy of investigator-initiated research and made R01 grants a major part of the NEI research portfolio. The NEI and the vision research community are a lasting legacy of Carl's 30 years of service."

Kupfer stepped down as NEI director in 2000 at the age of 72 but remained active in vision research by compiling the Cogan Collection, an online series of clinical cases and pathology reports of more than 6,000 patients in honor of his late colleague Dr. David Cogan, a world renowned ophthalmologist. He also wrote the *History of the National Eye Institute, 1968-2000*, which chronicled the inception of the institute and its growth during his tenure.

Kupfer expanded the NEI research program to include areas such as molecular biology, immunology, neuroscience and molecular genetics. He also supported the visual processing program within the NEI intramural program, which has become a crown jewel of visual neuroscience.



Basic research also thrived under Kupfer. Investigators identified genes associated with juvenile primary open-angle glaucoma, macular degeneration, retinitis pigmentosa and retinoblastoma. During his tenure as director, the NEI research portfolio grew to include more than 1,600 investigators at universities, medical centers and research institutions around the U.S.

Kupfer supported public health outreach and oversaw development of the National Eye Health Education Program (NEHEP), a partnership of professional, civic and volunteer organizations as well as government agencies dedicated to educating the public and professionals about eye health. He referred to NEHEP as a crucial bench-to-bedside project, serving as "a natural extension of our activities in vision research" and "the final step in the research process."

His presence in the international ophthalmology community led to numerous appointments, including coordinator for the U.S.-Japan Collaborative Agreement in Vision Research and director of the World Health Organization Collaborating Center for the Prevention of Blindness at NEI. As president of the International Agency for the Prevention of Blindness from 1982 to 1990, he increased collaboration among non-governmental organizations involved with blindness prevention with the WHO.

The Kupfer Award from the Association for Research in Vision and Ophthalmology was named in his honor and awarded to him in 1993, for his honorable public service on behalf of eye and vision research. In 1997, the Pan American Association of Ophthalmology Carl Kupfer Award for Prevention of Blindness was established in his honor to recognize efforts to increase eye care access for poor and underserved communities.

Kupfer earned his undergraduate degree from Yale University in 1948 and his medical degree in 1952 from Johns Hopkins School of Medicine. After completing his internship and assistant residency at the Wilmer Eye Institute at Johns Hopkins Hospital, he served in the U.S. Air Force for 2 years before returning to the laboratory as a research fellow in ophthalmology at both the Wilmer Eye Institute and Harvard Medical School.

Kupfer is predeceased by his wife, Dr. Muriel "Kim" Isolde Kaiser-Kupfer, a former chief of the NEI Ophthalmic Genetics and Visual Function Branch. He is survived by his children Charles and Sarah, and grandchildren.

## Berg Receives Chemical Society's Public Service Award

*NIGMS director Dr. Jeremy Berg (l) is a recipient of the 2011 Public Service Award from the American Chemical Society (ACS). The annual award recognizes outstanding contributions to public service or to the development of public policy that benefits the chemical sciences.*

*Berg was recognized as an advocate for basic research and for his efforts to increase the visibility of chemistry at NIH. Also honored was Dr. Norman P. Neureiter (r), director of the Center for Science, Technology and Security Policy at the American Association for the Advancement of Science. The award is the highest for public service from the 161,000-member organization. The ACS presented the awards on Apr. 13 at a Washington, D.C., event held in conjunction with the Council on Undergraduate Research.*



## Alzheimer's Diagnostic Guidelines Updated

For the first time in 27 years, clinical diagnostic criteria for Alzheimer's disease dementia have been revised. The NIA/Alzheimer's Association Diagnostic Guidelines for Alzheimer's Disease outline some new approaches for clinicians and provide scientists with more advanced guidelines for moving forward with research on diagnosis and treatments. The guidelines appeared online Apr. 19 in *Alzheimer's & Dementia: The Journal of the Alzheimer's Association*.

The original criteria were the first to address the disease and described only later stages, when symptoms of dementia are already evident. The update covers the full spectrum of the disease as it gradually changes over many years. Guidelines describe the earliest preclinical stages of the disease, mild cognitive impairment and dementia due to Alzheimer's pathology. The updates address the use of imaging and biomarkers in blood and spinal fluid that may help determine whether changes in the brain and those in body fluids are due to Alzheimer's. Biomarkers are increasingly employed in research to detect onset of disease and to track progression, but cannot yet be used routinely in clinical diagnosis without further testing and validation.

## Drug Collection Created to ID New Therapies

Researchers have begun screening the first definitive collection of thousands of approved drugs for clinical use against rare and neglected diseases. Scientists are hunting for additional uses of the drugs, hoping to find off-label therapies for some of the 6,000 rare diseases that afflict 25 million Americans. NIH's Chemical Genomics Center (NCGC) coordinates the effort.

Researchers assembled the set of drugs based on information from the NCGC Pharmaceutical Collection browser, <http://tripod.nih.gov/npc>. This publicly available, web-based application described in Apr. 27's *Science Translational Medicine* provides complete information on the nearly 27,000 active pharmaceutical ingredients, including 2,750 small-molecule drugs that have been approved by regulatory agencies in the U.S., Canada, Europe and Japan, as well as all compounds that have been registered for human clinical trials.

*The first definitive collection of thousands of approved drugs is being screened for additional clinical use against rare and neglected diseases.*



The browser, an ongoing effort, also includes entries on investigational drugs. The ultimate goal is to collect all of the more than 7,500 compounds that have been tested in man and that present potential jump-start development of treatments for rare and neglected diseases.

## Common Gene Variant Linked to Fibrosis Risk

NIH-funded scientists have identified a common genetic variant associated with substantially increased risk of developing pulmonary fibrosis, a debilitating and life-threatening lung condition. The gene variant is found in a region of DNA thought to regulate the production of an important mucus-forming protein. However, experts say knowing the variant is not, by itself, enough for a test to determine who would be at risk of the disease.

This gene variant near the mucin 5B gene is both fairly common and a risk factor for idiopathic pulmonary fibrosis (IPF) and familial interstitial pneumonia (FIP). IPF and FIP are two related lung diseases that produce progressive, irreversible and currently incurable scarring of the lungs that is called fibrosis. The study appeared Apr. 21 in the *New England Journal of Medicine*.

## Vitamin E Improves a Type of Fatty Liver Disease

A specific form of vitamin E improved the most severe form of fatty liver disease in some children, according to an NIDDK-funded study. Results appeared Apr. 27 in the *Journal of the American Medical Association*. A previous study found vitamin E effective in some adults with the disease.

Nonalcoholic fatty liver disease (NAFLD) is the most common chronic liver disease among U.S. children. NAFLD ranges in severity from steatosis (fat in the liver without injury) to nonalcoholic steatohepatitis or NASH (fat, inflammation and liver damage). Fatty liver increases a child's risk of developing heart disease and liver cirrhosis. The only way to distinguish NASH from other forms of fatty liver disease is with a liver biopsy. Weight loss may reverse the disease in some children, but other than dietary advice, there are no specific treatments. Excess fat in the liver is believed to cause injury by increasing levels of oxidants, compounds that damage cells.

Using liver biopsies, researchers found that after 96 weeks of treatment, 58 percent of the children on vitamin E no longer had NASH, compared to 41 percent of the children on metformin (a diabetes drug) and 28 percent on placebo. Vitamin E was better than placebo because it significantly reduced enlargement and death of liver cells.—  
**compiled by Carla Garnett**





### Women's Health Studies Seek Healthy Volunteers

Healthy women ages 18-65 are invited to participate in outpatient research studies. Compensation is provided. Call (301) 496-9576 and refer to protocols 81-M-0126, 88-M-0131 and 03-M-0138.

### Heat Tolerance Test Study

The Uniformed Services University of the Health Sciences is conducting a study to explore the effects of caffeine, heat and exercise on muscles in healthy Caucasian men and women between the ages of 18 and 45. Volunteers may be compensated for their participation. If interested, phone (301) 295-1371 or email [humanperformancelab@usuhs.mil](mailto:humanperformancelab@usuhs.mil).

### Midlife & Menopause Research Studies

Women ages 40-65 who struggle with irritability, anxiety, sadness or loss of enjoyment at the time of the menopause transition are invited to participate in outpatient research studies. There is no cost for participation. Compensation may be provided. Phone (301) 496-9576 and refer to study 88-M-0131.

### Study of Neck Pain

Are you a healthy individual with neck pain for 3 months or less? If you are between the ages of 18 and 65, you may be able to participate in a neck pain study and receive a comprehensive cervical musculoskeletal examination. Healthy volunteers are also needed. Email [NeckPainStudy@gmail.com](mailto:NeckPainStudy@gmail.com) or call (301) 451-7514. Refer to study 02-CC-0245.

### Smokers Needed for Study

The Molecular Imaging Branch, NIMH, is looking for healthy volunteers who smoke, with no current or history of psychiatric illness, between the ages of 18 and 65, for a multitude of studies. Studies may include PET scans, MRI, psychological interview, neuropsychological testing and other procedures depending on the project in which you choose to participate. Call (301) 435-8982 for more information.

### Study for Mothers of 4- and 5-Year-Olds

Are you a mother of a 4- or 5-year-old? You may be able to participate in the Mothers' TAKE study, which stands for Mothers' Thoughts About what their Kids Eat. Participants will fill out an online survey and complete one 90-minute in-person session at NIH. Your child will not need to participate. Compensation is provided. Call (301) 451-1268 or email [mothers.take@gmail.com](mailto:mothers.take@gmail.com). Refer to study 10-HG-0076.

### May Is Healthy Vision Month

Each May, the National Eye Institute sponsors Healthy Vision Month (HVM), an annual observance designed to elevate vision as a health priority for the nation. HVM, which is part of a broader, year-round communication strategy, focuses on raising awareness about the importance of comprehensive dilated eye exams in maintaining good eye health.

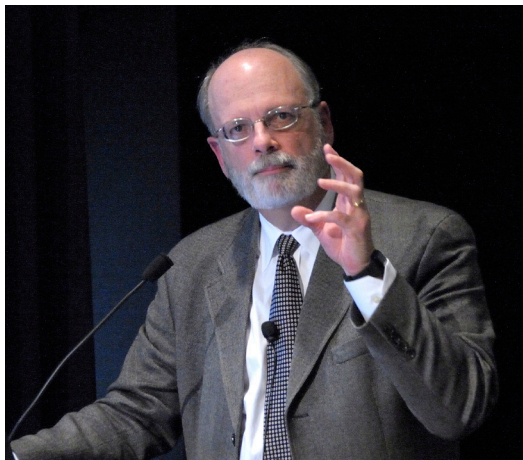
Eye diseases often have no symptoms. Comprehensive dilated eye exams play a critical role in the preservation of sight by helping to detect eye diseases in their early stages before any noticeable vision loss occurs. Eye care professionals can also detect any refractive errors such as myopia (nearsightedness), hyperopia (farsightedness), presbyopia and astigmatism, which can often be easily corrected with glasses or contact lenses. NEI encourages all Americans to have regular eye exams.



HVM also promotes the importance of good eye safety practices at work, at home and in recreational and sports activities. To learn more about what NEI is doing for HVM and to find resources to raise awareness about eye health, comprehensive dilated eye exams and eye safety, visit [www.nei.nih.gov/hvm](http://www.nei.nih.gov/hvm).

NEI is also hosting a variety of other activities in May and June to celebrate HVM—all are welcome:

- Now through June 30: Give to the 11th annual Food Drive sponsored by NEI to benefit the Capital Area Food Bank. Donation boxes for nonperishable food items are located around the NIH campus, including the lobby of Bldg. 31A. Food will also be collected at the last two events mentioned below.
- May 11-July 8 at the Clinical Center Galleries: View the paintings of Ruth Lotz, an accomplished artist living independently with low vision.
- May 18 at 1 p.m. in Bldg. 45, Rm. C1/C2: Listen to Dr. Rachel Bishop, chief, consult services section, NEI, speak about keeping your eyes healthy—part of the NIH Focus on Wellness series.
- June 7 at 2 p.m. in Masur Auditorium: See the documentary *Going Blind*, a film that examines how blindness and low vision issues profoundly affect the lives of people and those who love them. More information about the film can be found at <http://goingblindmovie.com/synopsis/index.html>.



*Dr. Barton Haynes of Duke was once a trainee under NIAID director Dr. Anthony Fauci.*

## Regard for Hill Informs Memorial Lecture

There are only a few named lectures held on campus each year where the subtext is frank belovedness, and the annual James C. Hill Memorial Lecture is one of them. Where else are you going to find NIAID director Dr. Anthony Fauci showing family slides while introducing the speaker?

The ninth version of the lecture, held Apr. 14 in Lipsett Amphitheater, featured Dr. Barton Haynes of Duke University Medical Center, who once was a trainee under Fauci in Bldg. 10.

That a member of the NIAID extended family was guest speaker was only in keeping with the familial tone of the Hill lecture.

"We all loved Uncle Jim," said Fauci. "He was keenly intelligent, highly sophisticated, self-deprecating and had an extraordinary sense of humor." Hill was godfather to Fauci's daughter Megan and one slide showed Hill with Fauci's older daughter Jenny.

Hill hailed from Manila, Ark., a town of less than 3,000, Fauci said. Hill once joked that it was the kind of town where Velveeta passed for gourmet cheese in the local market.

"We still feel his loss to this day," Fauci said.

Haynes, who spoke on "The Path to HIV Vaccine Development," focused his remarks on so-called "elite neutralizers," a small percentage of patients whose immune systems, although initially unable to make proper antibodies to HIV, somehow rebound within 2-4 years of infection and begin to produce neutralizing antibodies to the virus.

Haynes, who directs the Duke Human Vaccine Institute, and his colleagues are searching for "Achilles heels" where neutralizing antibodies can bind to HIV and block its function. His team has already discovered a range of characteristics of such antibodies and is exploring their structural traits.

Haynes also spoke about the RV144 vaccine that was found mildly protective in a trial conduct-

ed in Thailand recently. He and his colleagues are trying to discover what the "correlates of protection" were in that vaccine, with a view toward bolstering the effective elements.

He said his group has identified 18 lead candidate monoclonal antibodies that will soon enter passive protection trials in animals.

The 35-minute talk is available under Past Events at <http://videocast.nih.gov/default.asp>.—Rich McManus

## Solowey Awardee Barres To Lecture, May 25 in Lipsett Amphitheater

Dr. Ben Barres, professor, department of neurobiology, Stanford University, has received the 2011 Mathilde Solowey Lecture Award in the Neurosciences for his pioneering research on neuron-glia interactions in the central nervous system (CNS).

The annual award, which is administered by the Foundation for Advanced Education in the Sciences, honors rising neuroscientists for innovative research with significant translational potential. Barres will deliver a lecture titled, "What Do Astrocytes Do?" at 10 a.m. on Wednesday, May 25 in Lipsett Amphitheater, Bldg. 10.

Barres directs a group that focuses on the role of neuron-glia interactions in the mammalian CNS, with emphasis on understanding the basis of CNS regenerative and remyelination failure, the blood-brain barrier and the role of astrocytes at synapses. The group has developed methods to highly purify and culture retinal ganglion cells as well as the glial cell types they interact with—oligodendrocytes and astrocytes—from the rodent optic nerve.

Using a variety of methods, including cell purification by immunopanning, tissue culture, patch clamping, immunohistochemistry and molecular biology, the lab has found evidence of several novel glial signals that induce the onset of myelination, the clustering of axonal sodium channels, the survival and growth of retinal ganglion cells and the formation of synapses. They are characterizing these processes and identifying the key glial-derived molecules. Publications have appeared in *Nature*, *Cell*, *Neuron* and *Proceedings of the National Academy of Sciences*.

Barres received his B.S. from Massachusetts Institute of Technology, M.D. from Dartmouth Medical School, his Ph.D. with David Corey at Harvard Medical School and his postdoctoral fellowship with Martin Raff at University College London. He presently serves as chair of the department of neurobiology at Stanford and sits on many editorial boards including *Neuron*, *Science*, *Development* and the *Journal of Cell Biology*.

Barres is creator and director of the Masters of Science in Medicine Program ([msm.stanford.edu](http://msm.stanford.edu)), a new program at Stanford to train Ph.D. students about human biology and disease. He is a founding member of the Myelin Repair Foundation, which focuses on translational research to develop new drugs for multiple sclerosis. Barres is transgendered, an elected fellow of American Women in Science and an activist for the rights of women and minorities.

